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	Application No.	Applicant(s)
Nadian at Allegaria	09/536,037	LI ÉT ÂL.
Notice of Allowability	Examiner	Art Unit
	Toniae M. Thomas	2822
		
The MAILING DATE of this communication app All claims being allowable, PROSECUTION ON THE MERITS IS herewith (or previously mailed), a Notice of Allowance (PTOL-85 NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT R of the Office or upon petition by the applicant. See 37 CFR 1.31	o (OR REMAINS) CLOSED in this ap or other appropriate communication RIGHTS. This application is subject to	pplication. If not included
1. A This communication is responsive to the RCE filed on 09		
2. ☑ The allowed claim(s) is/are <u>52-64</u> .		
3. $igotimes$ The drawings filed on <u>27 March 2000</u> are accepted by the	Examiner.	
 Acknowledgment is made of a claim for foreign priority u a) ☐ All b) ☐ Some* c) ☐ None of the: 	nder 35 U.S.C. § 119(a)-(d) or (f).	
1. ☐ Certified copies of the priority documents have	e heen received	
2. Certified copies of the priority documents have		
3. Copies of the certified copies of the priority do	occurred in Application No	
International Bureau (PCT Rule 17.2(a)).	currents have been received in this	national stage application from the
* Certified copies not received:		
Applicant has THREE MONTHS FROM THE "MAILING DATE" noted below. Failure to timely comply will result in ABANDONN THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.	of this communication to file a reply MENT of this application.	complying with the requirements
5. A SUBSTITUTE OATH OR DECLARATION must be subm INFORMAL PATENT APPLICATION (PTO-152) which give	nitted. Note the attached EXAMINER' es reason(s) why the oath or declara	'S AMENDMENT or NOTICE OF tion is deficient.
6. CORRECTED DRAWINGS (as "replacement sheets") mus		
(a) ☐ including changes required by the Notice of Draftspers	son's Patent Drawing Review (PTO.	048) attached
1) 🗌 hereto or 2) 📗 to Paper No./Mail Date		ero) attached
(b) ☐ including changes required by the attached Examiner's Paper No./Mail Date	s Amendment / Comment or in the O	ffice action of
Identifying indicia such as the application number (see 37 CFR 1 each sheet. Replacement sheet(s) should be labeled as such in t	.84(c)) should be written on the drawin	igs in the front (not the back) of
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit	SIT OF BIOLOGICAL MATERIAL M	nuct be cubmitted. Net- 11
attached Examiner's comment regarding REQUIREMENT	FOR THE DEPOSIT OF BIOLOGICA	AL MATERIAL.
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Attachment(s) . ☑ Notice of References Cited (PTO-892)	E D Nagaration State	
. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)		atent Application (PTO-152)
	6. ☐ Interview Summary (Paper No./Mail Date	(PTO-413),
Information Disclosure Statements (PTO-1449 or PTO/SB/08 Paper No./Mail Date 10/09/03	8), 7. 🔀 Examiner's Amendm	ent/Comment
. Examiner's Comment Regarding Requirement for Deposit	8. 🛛 Examiner's Statemer	of Reasons for Allowance
of Biological Material	9. 🗌 Other	
		Mary Wilczewski
		Primary Examiner

Application/Control Number: 09/536,037

Art Unit: 2822

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EXAMINER'S AMENDMENT

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after allowance or after an Office action under *Ex Parte Quayle*, 25 USPQ 74, 453 O.G. 213 (Comm'r Pat. 1935). Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, prosecution in this application has been reopened pursuant to 37 CFR 1.114. Applicant's submission filed on 09 October 2003 has been entered.

Amendment

2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

The application has been amended as follows:

The Abstract of the Disclosure has been replaced with the following:

--A low k interlevel inter-level dielectric layer fabrication method includes providing a substrate having integrated circuitry at least partially formed thereon. An oxide-comprising interlevel inter-level dielectric layer comprising including carbon and having a dielectric constant no greater than 3.5 is formed over the substrate. After forming the carbon comprising dielectric layer, it is exposed to a plasma comprising

Application/Control Number: 09/536,037

Art Unit: 2822

including oxygen effective to reduce the dielectric constant to below what it was prior to said the exposing. A low k interlevel inter-level dielectric layer fabrication method includes providing a substrate having integrated circuitry at least partially formed thereon. In a chamber, an interlevel inter-level dielectric layer comprising including carbon and having a dielectric constant no greater than 3.5 is plasma-enhanced chemical vapor deposited over the substrate at subatmospheric pressure. After forming the carbon comprising dielectric layer, it is exposed to a plasma comprising including oxygen at subatmospheric pressure effective to reduce the dielectric constant by at least 10% below what it was prior to said the exposing. The exposing occurs without removing the substrate from the chamber between the depositing and the exposing, and pressure within the chamber is maintained at subatmospheric pressure between the depositing and the exposing.—

Reasons for Allowance

3. The following is an examiner's statement of reasons for allowance: the prior art of record does not anticipate, teach, or suggest a method for forming a low k inter-level dielectric layer substantially as claimed, wherein the method comprises forming a dielectric layer which comprises a compound of silicon bonded to both nitrogen and an organic material, and subsequently exposing the dielectric layer to a plasma comprising nitrogen – the nitrogen-comprising plasma effective to reduce the dielectric constant to below what it was prior to the step of exposing.

Art Unit: 2822

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Toniae M. Thomas whose telephone number is (571) 272-1846. The examiner can normally be reached on Monday-Thursday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amir Zarabian can be reached on (571) 272-1852. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TMT

16 May 2004

Mary Wilczewski Primary Examiner